

Amendment to the Claims

1. (Currently amended) An electrically variable optical attenuator comprising:

a pair of waveguides, each having a terminus, wherein at least one terminus is movable relative to the other terminus upon urging from an electrically driven actuator; and

one or more sensors comprising a wavelength sensor disposed relative to the pair of waveguides to sense one or more variables that affects attenuation, and provide one or more sensor outputs related to the one or more variables. 7  
~~wherein the variable sensed by the one or more sensors is at least one of temperature, wavelength, acceleration, or vibration.~~

2. (Currently amended) The attenuator of claim 1, wherein the one or more sensors further comprise a temperature sensor.

3. (Original) The attenuator of claim 2, wherein the temperature sensor is disposed proximate at least one of the waveguides.

4. (Original) The attenuator of claim 2, wherein the temperature sensor is formed integral with the attenuator.

5. (Original) The attenuator of claim 4, wherein the temperature sensor is a variable capacitor.

6. (Original) The attenuator of claim 4, wherein the temperature sensor is a resistance temperature device.

7. (Cancelled)

8. (Cancelled)

9. (Cancelled)

10. (Currently amended) The attenuator of claim 1, wherein the one or more sensors further comprise an acceleration sensor.

11. (Currently amended) The attenuator of claim 1, wherein the one or more sensors further comprise a vibration sensor.

12. (Currently amended) An electrically variable optical attenuator system comprising:

a pair of waveguides, each having a terminus, wherein at least one terminus is movable relative to the other terminus upon urging from an electrically driven actuator;

a wavelength sensor disposed relative to the pair of waveguides to sense a wavelengthvariable that affects attenuation, and provide a sensor output related to the ~~variable, wherein the variable sensed by the sensor is at least one of temperature, wavelength, acceleration, or vibration~~; and

a controller adapted to compensate an attenuation level based on the sensed wavelengthvariable.

13. (Cancelled)

14. (Cancelled)

15. (Cancelled)

16. (Cancelled)

17. (Cancelled)

18. (Cancelled)

19. (Cancelled)

20. (Original) The system of claim 12, wherein the controller includes memory containing a look-up table relating the sensed variable to attenuation.

21. (Original) The system of claim 20, wherein the look-up table is multidimensional.

22. (Original) The system of claim 12, wherein the controller includes memory containing coefficients for a function relating the sensed variable to attenuation.

23-36. (Canceled)

37. (Currently Amended) An electrically variable optical attenuator system comprising:

- a pair of waveguides, each having a terminus, wherein at least one terminus is movable relative to the other terminus upon urging from an electrically driven actuator; and

- a controller adapted to receive a value of an anticipated wavelength of the light to pass through the wavelengthparameter, and to compensate an attenuation level based on the anticipated wavelength of the light to pass through the waveguidesparameter.

38. (Original) The system of claim 37, wherein the anticipated parameter is an operating temperature of the system.

39. (Cancelled)